

General Database Maintenance

FS5FILES Utility functions

Setting Up a Set of Files

Getting Started

- Before any parametric or observed data can be entered into a fs5files database, you must create the files.
 - This is similar to creating tables in Informix
- Information needed so you can correctly size your files
 - Types of data
 - Amount of data

Setting Up a Set of Files

FILESIZE and FILECRAT

- FILESIZE determines how big files need to be based on number of stations, segments, number of days of data, etc.
- FILESIZE also creates a FILECRAT input deck.
 - This will be located in a filesize_pun file in your output directory.
- FILECRAT creates an **empty** set of files.
- Do not run FILECRAT on your regular fs5files directory, or

Setting Up a Set of Files

PRDUTIL

- The Processed Database (PRD) needs to be initialized before it can be used.
- Information needed
 - What datatypes can be written to the PRD
 - How many days of data to store for each datatype
 - Which file to store the datatype (PRDTS1, PRDTS2, ...)
- Run the prdutil program using the DEFTYPE command

Cleaning Up Your fs5files Database

Reorder/Compress

- Why reorder?
 - ▶ Recover space from obsolete records
 - ▶ Change the size of you database files
- When to reorder?
 - ▶ Before starting a major ppinit or fcinit definition project
 - ▶ After completing a major ppinit or fcinit definition project
 - ▶ Whenever a ppinit or fcinit status run indicates a file is getting full (>90% used).

Cleaning Up Your fs5files Database

Reorder

- The reorder program reads one set of fs5files, picks out all the non-deleted data and writes that data to a another set of files.
- reorder recovers 'deleted' space in your database.
- reorder allows you to move your data to another larger or smaller set of files when necessary.

Cleaning Up Your fs5files Database

Reorder Process

- Always make a back up before you reorder
 - Even if you are absolutely certain that nothing will go wrong!
- Before you reorder your files you should make a backup set of files.
 - **Always!**
- If you are planning to reorder your files, tar them up first.
 - go ofs_fs5files
 - tar -cvf ~/my_fs5files_tar *

Cleaning Up Your fs5files Database

Reorder Process (cont.)

- filesize (if necessary)
 - ▶ Make changes to filesize input
 - ▶ Run filesize
 - ▶ Copy the filesize_pun output file into the **filecrat** input directory
- filecrat
 - ▶ Create directories for new files
 - create_files_group oper_new
 - ▶ Make sure to run filecrat on new directories (use options of ofs script)
 - ofs -p filecrat -i filecrat -o filecrat -f oper_new -g oper

Cleaning Up Your fs5files Database

Reorder Process (cont.)

- **prdutil deftype command**
 - Check your deftype input to make sure it's correct and complete
 - Run prdutil
- **Run reorder**
 - `ofs -p reorder -i reorder -o reorder -f oper -r oper_new -g oper`
 - Check your output for errors and warnings!
- **These processes are outlined in ofs_reorder script along with copying needed global files.**
 - **USE THE SCRIPT!**



Other Useful Programs

PRDUTIL and PPDUTIL

PPDUTIL

Pre-Processor Database Utility

- DUMPOBS – dumps out observations from the PPDB.
 - Observations not parameters
 - Observations not time series
- DUMPSHEF – dumps out the observations as SHEF messages.
- DUMPOBS example:

```
DUMPOBS 0812 081619CDT
STAID BOTH
WTT02 COMO2 QUAO2 &
FLRK1 AMCK1
DUMPOBS *-09 *
DTYPE PP24 PP06
```

PRDUTIL

Processed Database Utility

- TSDATA— dumps out time series from the PDB.
 - Time series not parameters
 - Time series not observations
 - Time series may be model simulations or processed observations
- DUMPSHEF – dumps out the time series as SHEF messages. (Yes, similar to PPDUTIL.)
- TSDATA example:

```
TSDATA  
ALL  
END
```

```
TDSATA  
MAT BOTH DEGF  
MATAREA1 MATAREA2  
STG REG ALL  
END
```